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AI for Business: Sellers and Consumers' Acceptability Assessment for Chatbot Utilization in the Entrepreneurship Industry of Noveleta, Cavite

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Abstract

This study explores the attitudes of sellers and consumers in Noveleta, Cavite, towards chatbot utilization in the entrepreneurship industry. Employing an independent t-test research design, the research reveals that both sellers and consumers exhibit a cautious optimism. Sellers display mid to slightly positive attitudes, while consumers generally show openness and positivity, with specific reservations related to online business and mobility. In the e-commerce landscape, artificial intelligence (AI) significantly shapes marketing strategies. Small businesses are adapting to changing consumer behavior by implementing AI-driven tools like chatbots. The main aim is to meet customer needs efficiently, but challenges in widespread adoption persist. Insights from the study underscore the importance of tailored approaches to address specific concerns among

sellers and consumers in Noveleta. Consumers express a cautious intrigue towards chatbots but harbor reservations, particularly regarding financial information. Balancing concerns with a willingness to accept automation, the study suggests that chatbots can bridge the trust gap by prioritizing transparency, human oversight, and robust security measures. Aligned with existing research, the study emphasizes the positive influence of perceived fun and trust on user acceptance of chatbots. Additionally, addressing psychological factors is crucial for successful adoption, as demonstrated by the impact of psychological readiness on perceived usefulness. Overall, the study provides nuanced insights into the dynamics of AI acceptance in the local entrepreneurship industry, guiding businesses in Noveleta towards effective implementation strategies.

Keywords: Business, Chatbot, Entrepreneurship, Cavite

Introduction

Over the last few decades, Artificial Intelligence (AI) has experienced significant growth, focusing on programming computers to perform tasks that typically involve human intelligence. Chatbots, a widely used application of AI, are computer programs often employed on E-commerce platforms to assist shoppers with their inquiries and streamline operational costs. Ensuring user adoption of chatbots is crucial for achieving excellent service, meeting operational goals, and enhancing chatbot capabilities through the utilization of big data (Trang, 2022).

In that instance, some consumers and sellers utilized this artificial intelligence chatbot. According to Rese *et al.* (2020) ^[11], online sellers are exploring the potential of chatbots, which are computer programs that engage in conversation with users using everyday language. These chatbots can help consumers by answering shopping-related questions in a conversational way, reducing the need to wait for a human salesperson or use other automated methods. However, it is not clear yet which consumers are open to this new way of communication and what factors influence their acceptance of chatbots in the merchandise experience.

Still, a significant number of people spend more time online interacting with chatbots. Additionally, the importance of digital service agents like chatbots has grown for businesses. Moreover, small businesses are continually implementing marketing technology, suggesting that their owners and managers are positive and determined to embrace digital technologies. They believe these technologies will allow them to connect more effectively and engage with consumers on a deeper level. Small business owners are noticing a shift in client behavior; in the past, purchasing from them required visiting a physical store, but now products are frequently discovered on online platforms. This shift encourages small firms to adapt and provide higher-quality services to satisfy changing consumer demands. Small businesses' strategic position promotes responsive

communication and deeper customer relationships, facilitated by close interactions between management and the market (Selamat & Windasari, 2021) ^[15].

The main aim of using chatbots in customer service is to meet customer needs efficiently without the need for extensive conversations. However, the widespread adoption of this innovation faces challenges in overcoming obstacles that hinder its acceptance. A recent study delved into various factors, such as how consumers perceive chatbots, the barriers they encounter, and the perceived risks involved. These factors play a role in shaping consumers' intentions to continue using chatbot services in community enterprises. As chatbots become more widespread, there is a growing interest in user satisfaction and acceptability of chatbot usage (Kwangsawad & Jattamart, 2022) ^[4].

With this, Artificial Intelligence (AI) plays a crucial role in the realm of e-commerce marketing. In the pursuit of higher profits and increased sales, businesses leverage promotional tools. Presently, e-commerce enterprises employ artificial intelligence-driven advertising strategies and tools to enhance the promotion and sale of their products. This approach enables businesses to effectively target their desired consumer base. Additionally, AI technology proves valuable in identifying potential buyers and forecasting market demands, trends, and consumer behavior. Moreover, using artificial intelligence in e-commerce makes the business process easy and attracts those who are less experienced and less privileged consumers and sellers (Wang *et al.*, 2023) ^[17].

Objectives of the Study

This study is conducted with the overarching purpose of evaluating the acceptance levels of AI chatbots within the entrepreneurial industry of Noveleta, Cavite, with a focus on both sellers and consumers. The specific objectives of this research encompass understanding the general attitude of sellers towards the utilization of chatbots in business across dimensions such as innovativeness, optimism, discomfort, and insecurity. Similarly, the study aims to delve into the general attitude of consumers regarding chatbot utilization, exploring the same attitude dimensions. Additionally, a critical examination will be undertaken to discern any significant differences that may exist in the Technology Readiness Index between sellers and consumers. Beyond assessing attitudes, the study endeavors to translate its findings into practical insights for educational contexts by identifying potential school programs, projects, or activities that can be developed based on the research outcomes. Through these inquiries, the research seeks to contribute valuable insights to inform strategies and interventions in the integration of AI chatbots within the entrepreneurial landscape of Noveleta, Cavite.

Methods and Materials

In this research, the researcher employed a descriptive research design to scrutinize the acceptability of chatbot utilization within the entrepreneurship industry of Noveleta, Cavite. Focusing on discerning potential discrepancies in acceptance levels between sellers and consumers, the study unfolded through a meticulous data gathering procedure. The selected method facilitated convenient and efficient data collection, ensuring a comprehensive understanding of the perceptions of both sellers and customers. The population of

interest encompassed consumers and sellers residing in Noveleta, Cavite, with a sample size of 120 participants, evenly distributed through convenience sampling. By combining a robust research design with strategic data gathering, the researcher aimed to provide valuable insights into the integration of AI in the local entrepreneurship industry, contributing to a nuanced understanding of acceptance dynamics in that evolving business landscape.

The study employed independent t-test to examine the differences between the acceptability of chatbot utilization among sellers and customers in the entrepreneurship industry of Noveleta, Cavite. The primary objective was to assess whether there were significant differences in the acceptance levels between those two groups – sellers and consumers. This design was selected as it aligned with the study's focus on evaluating the distinct perspectives of sellers and customers regarding the integration of AI in the business background.

The study was conducted at various establishments within Noveleta, Cavite, targeting both sellers and customers as participants to gather comprehensive insights into their perceptions. To collect data, a sample of 120 participants, evenly divided between 60 sellers and 60 consumers, was chosen using convenience sampling. This method ensured the study accurately represented the entire group and was reliable. The researchers used this method to gain a good understanding of the target group and derive trustworthy conclusions based on the study's findings. The data gathering procedure was a critical step in any research or analysis. Researchers had to ensure a clear understanding of this important step to simplify the analysis and ensure meaningful results. The researcher formally wrote a letter to the school head of Noveleta Senior High School, requesting permission to conduct the study. The context and procedure of the study were planned during the month of November. Formulating questions for consumers and sellers in Noveleta, Cavite, was part of the planning. To gather data, the researchers used an online survey questionnaire form. This method ensured convenience for all researchers and participants. The online survey questionnaire form was distributed after validation by the researcher group's leader. The researchers explained the significance of the respondents' responses to the study, clarifying some terms so that respondents could complete the questionnaire fully aware of their role as the study's subjects. The study aimed to determine the general attitude level of sellers towards the utilization of chatbots in business using the Technology Readiness Index. This Index included several components that made it better suited to capturing crucial aspects of AI, but it also included some elements that might be less suitable. The Technology Readiness Index was divided into four subscales: Innovativeness, Optimism, Discomfort, and Insecurity. These subscales presented a mix of measures corresponding to individual user experiences and reactions to technology being used more often.

The researchers employed the Technology Readiness Index to test for convergent and discriminant validity with their new scale, hypothesizing that their measures would have stronger associations with the societally based subscales of the Technology Readiness Index than the individually based subscales, as AI was outside the end user's own control (Schepman *et al.*, 2020) ^[12].

Results and Discussion

This section of the study examines the general attitudes of sellers and consumers towards the utilization of chatbots in business, focusing on innovativeness, optimism, discomfort, and insecurity. Sellers demonstrate a high level of innovativeness, often being early adopters, while their optimism is moderate, indicating potential unawareness of chatbot advantages. Sellers express a mid-level discomfort and insecurity, suggesting a cautious but receptive attitude towards chatbot utilization. Consumers, on the other hand, exhibit high innovativeness, openness to new technologies, and a moderate level of optimism, particularly in empowerment and efficiency. Consumers are cautiously intrigued with a mid-level discomfort and insecurity, emphasizing hesitancy in sharing financial information but openness to automation. Overall, both sellers and consumers show cautious optimism towards chatbots, with a correlation analysis revealing no significant differences between the two groups. These findings provide valuable insights for businesses considering the implementation of chatbot technology, highlighting areas of opportunity and potential concerns.

Table 1.1: Seller’s General Attitude towards Chatbot Utilization in terms of Innovativeness

Questions:	Mean	Rank	Interpretation
Would you say you're usually one of the first among your friends to get new technology when it comes out?	3.72	1	High
Can you typically figure out how to use new high-tech products and services without assistance?	3.33	3	Mid
Do you enjoy keeping up with the latest technological developments in your field?	3.45	2	High
Do you find it fun to figure out how to use high-tech gadgets?	3.32	4	Mid
General Average:	3.45		High

Sellers demonstrate a positive attitude toward innovativeness, as reflected in the responses to four specific questions related to chatbot utilization. The respondents, on average, consider themselves among the first in their social circles to adopt new technology, indicating an early adopter mentality (Mean: 3.72). While they express a moderate level of confidence in independently using new high-tech products and services (Mean: 3.33), the general sentiment leans toward a positive outlook.

Moreover, the sellers, on average, express an interest in staying updated with the latest technological developments in their field (Mean: 3.45). This underscores a proactive approach to staying informed about industry advancements. Additionally, respondents find some level of enjoyment in figuring out how to use high-tech gadgets (Mean: 3.32), indicating a balanced perspective on the technical aspects of innovation.

The overall average score across these questions is 3.45, suggesting a consistent positive inclination toward innovativeness among sellers. While there may be a moderate level of hesitancy in independently using new technology, the general trend indicates an openness to embracing technological advancements. These findings offer valuable insights into sellers' attitudes and receptivity to chatbot utilization in the business context.

A study conducted by Dharun Lingam Kasilingam (2020) [3] delves into the factors influencing consumers' intention to use chatbots for shopping. The findings indicate that personal innovativeness has a positive and significant impact on both attitude and intention to use chatbots. This implies that sellers who are more open to embracing new technologies are likely to be more receptive to incorporating chatbots into their business practices.

Table 1.2: Seller’s General Attitude towards Chatbot Utilization in terms of Optimism

Questions:	Mean	Rank	Interpretation
Do you believe that technology gives people more control over their daily lives?	3.25	2	Mid
Do you appreciate the flexibility of doing business via computers outside of regular business hours?	3.38	1	Mid
Has technology made you more efficient in your occupation?	3.13	4	Mid
Do you feel that technology has given you more freedom of mobility?	3.22	3	Mid
General Average:	3.25		Mid

Sellers express a moderate level of optimism regarding the utilization of chatbots, as evident from the findings presented in Table 1.2. The responses to specific questions related to optimism indicate a balanced perspective on the impact of technology in their professional context.

On average, sellers believe that technology contributes to giving individuals more control over their daily lives (Mean: 3.25), showcasing a moderate level of agreement. They also appreciate the flexibility offered by technology, especially computers, for conducting business outside regular hours (Mean: 3.38), indicating a slightly above-average level of appreciation.

Sellers acknowledge that technology has made them more efficient in their occupations, although to a moderate extent (Mean: 3.13). Additionally, they express a moderate level of agreement that technology has provided them with more freedom of mobility (Mean: 3.22).

The overall average score across these questions is 3.25, reflecting a consistent moderate level of optimism among sellers. This suggests that sellers generally hold positive views on technology's potential to enhance control over daily lives, flexibility in business operations, efficiency, and freedom of mobility.

Table 1.3: Seller’s General Attitude towards Chatbot Utilization in terms of Discomfort

Questions:	Mean	Rank	Interpretation
Have you found that technical support lines aren't helpful because they don't explain things in terms you understand?	3.40	1	Mid
Do you ever feel that technology systems aren't designed for use by ordinary people?	3.18	4	Mid
Have you ever encountered a high-tech product or service manual that wasn't written in plain language?	3.20	3	Mid
When you get technical support, do you ever feel like you're being taken advantage of by someone who knows more than you do?	3.30	2	Mid
General Average:	3.27		Mid

The table shows the seller's general attitude towards chatbot utilization in terms of discomfort. The mean scores for all questions range from 3.18 to 3.40, with a general average of 3.27. All questions were interpreted as "Mid", indicating that the sellers are neither comfortable nor uncomfortable with chatbots. The ranks of the questions suggest that sellers are most comfortable with questions about being taken advantage of by technical support (Rank 2) and least comfortable with questions about technical support lines being unhelpful (Rank 1). Overall, the table suggests that sellers have a neutral attitude towards chatbots. They are neither overly enthusiastic nor resistant to their use.

While discomfort exists in specific areas, it doesn't translate to widespread rejection of chatbots. The neutral scores suggest the need for targeted interventions to address specific anxieties, like improving technical support clarity and empowering sellers through training. A deeper understanding of context, such as seller demographics and chatbot functionalities, could further refine this analysis.

The study by Choi and Kang (2021), titled "The role of the chatbot on customer purchase intention: towards digital relational sales," further adds to the context. This research underscores the potential positive impact of chatbots on consumer purchasing behavior. Specifically, the study emphasizes the significance of pleasant chatbot experiences and brand familiarity in influencing sales intentions, suggesting that the integration of chatbots in sales conversations may enhance overall deal closure in the long term (Choi & Kang, 2021).

Table 1.4: Seller's General Attitude towards Chatbot Utilization in terms of Insecurity

Questions:	Mean	Rank	Interpretation
Are you hesitant to give out your credit card number over a computer?	3.38	1	Mid
Do you feel it's unsafe to conduct financial business online?	3	6	Mid
Are you concerned that information you send over the Internet could be seen by others?	3.30	2	Mid
Do you lack confidence in doing business with a company that can only be reached online?	3.15	5	Mid
Do you believe that any electronic business transaction should be confirmed later in writing?	3.18	4	Mid
When something gets automated, do you feel the need to check carefully that the machine or computer isn't making mistakes?	3.20	3	Mid
General Average:	3.20		Mid

Table 1.4 indicates that merchants are generally insecure about using chatbots. This is an overview: Mean scores near 3 (mid): The means for all individual questions are close to mid, showing neither substantial agreement nor disagreement with insecurity assertions. No notable areas of concern: No specific question has a high mean, indicating that there are no big concerns about chatbots and security. Mixed sentiments may arise: Some inquiries are more "insecure", while others are more "secure". This implies a mix of comfort and fear among vendors. Overall, vendors appear to have a cautious but receptive attitude about chatbot security.

While sellers exhibit some caution and specific insecurities

about chatbot security, their overall attitude remains neutral. Addressing key concerns regarding financial risk, online privacy, and automation issues could pave the way for greater acceptance and effective utilization of chatbots by sellers.

The Myin, M. A. In their (2020) study "Examining the Drivers and Barriers of Intention to Use AI Chatbot to Purchase Apparel Online," Watchravesringkan, K., and colleagues found that although resistance to changing psychological readiness hurt the perceived usefulness of AI chatbots, relative advantage and complexity of psychological readiness had a positive influence.

Table 1.5: General Attitude Scale of Sellers towards Chatbot Utilization

Sellers General Attitudes:	Mean	Rank	Interpretation
Innovativeness	3.45	1	High
Optimism	3.25	3	Mid
Discomfort	3.27	2	Mid
Insecurity	3.20	4	Mid
General Average:	3.29		Mid

Sellers exhibit a moderately positive attitude toward chatbots, as reflected in the results. Regarding innovativeness, the highest mean score (3.45) suggests that sellers generally agree with the concept of chatbots as innovative tools. This indicates a broad openness and interest in integrating chatbots into their work processes. In terms of optimism, the relatively high score (3.25) implies that sellers hold a moderate to slightly optimistic view about the potential benefits of chatbots. While not excessively enthusiastic, they recognize the potential value in adopting this technology. In relation to discomfort, the score of 3.27, near the mid-value, indicates a moderate level of discomfort among sellers regarding chatbots. This suggests that sellers do not experience significant anxiety or opposition, but they may face some minor challenges or adjustments when using chatbots. Regarding insecurity, the lowest score (3.20) suggests a mid-level of insecurity associated with chatbots. While sellers may harbor specific concerns about security or trust, they do not appear to be fundamentally anxious about using chatbots due to security risks.

While sellers have not wholeheartedly embraced the chatbot trend, they have also not discouraged innovation. Table 5 reflects a state of cautious optimism, with sellers recognizing the potential of chatbots as cutting-edge tools (innovation score: 3.45). They perceive an opportunity in these conversational robots, although not to an extent that triggers enthusiastic endorsement (optimism score: 3.25). However, this optimistic outlook is tempered with a degree of caution. Sellers are mindful of the potential discomfort (3.27) and insecurity (3.20) that chatbots may introduce. It's akin to testing the waters in the digital realm cautiously before fully committing. Sellers are receptive to new opportunities but remain cognizant of the challenges that might emerge.

Referring to Astrid Schepman and Paul Rodway's study, "Initial Validation of the General Attitudes Towards Artificial Intelligence Scale" (2020), the scale demonstrated robust psychometric indices, along with convergent and discriminant validity when compared to other measures. Summaries of tasks performed by specific applications of Artificial Intelligence were gleaned from newspaper stories to cross-validate general attitudes with attitudes toward

instances of AI applications. Both perceived capability and comfort level were assessed for these applications (Schepman & Rodway, 2020)^[12].

Table 2.1: Consumer’s General Attitude towards Chatbot Utilization in terms of Innovativeness

Questions:	Mean	Rank	Interpretation
Would you say you're usually one of the first among your friends to get new technology when it comes out?	3.77	1	High
Can you typically figure out how to use new high-tech products and services without assistance?	3.53	3	High
Do you enjoy keeping up with the latest technological developments in your field?	3.62	2	High
Do you find it fun to figure out how to use high-tech gadgets?	3.45	4	High
General Average:	3.59		High

The table indicates that consumers generally hold a positive attitude toward the utilization of chatbots, particularly in terms of innovativeness. The mean score for all questions is 3.59, surpassing the mid-point of 3. Furthermore, all questions received a 'High' ranking in terms of interpretation. This suggests that consumers are not only open to trying new technologies but also feel comfortable using them independently and take pleasure in staying abreast of the latest developments.

Consumers emerge as genuine technology enthusiasts in this dataset, enthusiastically embracing the potential of new technologies such as chatbots. Their readiness to be early adopters is evident, with a mean score of 3.77, as is their confidence in navigating new technology independently, reflected in a mean score of 3.53. This inherent curiosity extends to a keen interest in staying updated with the latest advancements, indicated by a mean score of 3.62, and even enjoying the playful exploration of gadgets, with a mean score of 3.45.

For chatbots, this presents a fertile ground for adoption. Positioned as innovative and user-friendly, they are likely to be welcomed with open arms by this tech-savvy audience. The data distinctly illustrates that consumers are poised for the next big technological advancement, and chatbots, if strategically positioned, could very well fill that role.

According to Wu and Liu's study, "Millennials' attitude toward chatbots: an experimental study in a social relationship perspective" (2020), user adoption of chatbots is positively influenced by perceived fun and trust.

Table 2.2: Consumer’s General Attitude towards Chatbot Utilization in terms of Optimism

Questions:	Mean	Rank	Interpretation
Do you believe that technology gives people more control over their daily lives?	3.48	1	High
Do you appreciate the flexibility of doing business via computers outside of regular business hours?	3.33	3	Mid
Has technology made you more efficient in your occupation?	3.45	2	High
Do you feel that technology has given you more freedom of mobility?	3.25	4	Mid
General Average:	3.38		Mid

Consumers depicted in Table 2 present a nuanced picture of their optimism toward chatbots. They strongly endorse the belief that technology empowers them, as reflected in a mean score of 3.48, and express appreciation for the efficiency gains it brings, with a mean score of 3.45. However, they exhibit a more moderate stance on online business convenience (mean 3.33) and technology's impact on mobility (mean 3.25). This suggests a general openness to chatbots, particularly in terms of empowerment and efficiency, while also highlighting specific areas, such as online business and mobility, where addressing concerns and tailoring features could unlock further positive attitudes. While consumers in Table 2 readily embrace the empowering and efficiency-boosting aspects of technology, both scoring above 3.4, their overall optimism toward chatbots remains at a moderate level. The mid-range scores for online business and mobility (around 3.3) imply that chatbots may need to address specific concerns and tailor features in these domains to gain wider acceptance. It's a landscape marked by openness, but targeted solutions are pivotal for fostering more positive attitudes.

Wu and Liu's study, "Millennials' attitude toward chatbots: an experimental study in a social relationship perspective" (2020), delves into millennials' sentiments regarding chatbots and reveals that user acceptance is positively influenced by perceived fun and trust. Adapting chatbots to meet the requirements and preferences of different demographics may play a crucial role in enhancing adoption and fostering optimism (Wu & Liu, 2020).

Table 2.3: Consumer’s General Attitude towards Chatbot Utilization in terms of Discomfort

Questions:	Mean	Rank	Interpretation
Have you found that technical support lines aren't helpful because they don't explain things in terms you understand?	3.15	2	Mid
Do you ever feel that technology systems aren't designed for use by ordinary people?	3.32	1	Mid
Have you ever encountered a high-tech product or service manual that wasn't written in plain language?	3.12	3	Mid
When you get technical support, do you ever feel like you're being taken advantage of by someone who knows more than you do?	3.06	4	Mid
General Average:	3.16		Mid

The table indicates that consumers maintain a moderate attitude toward the utilization of chatbots, specifically in terms of discomfort. They neither express particular comfort nor discomfort with the use of chatbots.

Consumers exhibit a cautious intrigue rather than strong enthusiasm or apprehension toward chatbots. While specific concerns may exist, the overall discomfort level remains moderate. This creates an opportunity for developers to design chatbot experiences that bridge the gap toward broader adoption, considering and addressing consumer reservations.

Hyunok Choi and Jungmin Kang's study, "The role of the chatbot on customer purchase intention: towards digital relational sales" (2021), delves into how chatbots influence consumer purchasing behavior. The study emphasizes the

impact of pleasant chatbot experiences and brand familiarity on sales intention. This implies that integrating chatbots into sales conversations can potentially assist merchants in closing more deals in the long run.

Table 2.4: Consumer’s General Attitude towards Chatbot Utilization in terms of Insecurity

Questions:	Mean	Rank	Interpretation
Are you hesitant to give out your credit card number over a computer?	3.32	3	Mid
Do you feel it's unsafe to conduct financial business online?	3.12	5	Mid
Are you concerned that information you send over the Internet could be seen by others?	3.52	1	High
Do you lack confidence in doing business with a company that can only be reached online?	3.17	4	Mid
Do you believe that any electronic business transaction should be confirmed later in writing?	3	6	Mid
When something gets automated, do you feel the need to check carefully that the machine or computer isn't making mistakes?	3.52	2	High
General Average:	3.27		Mid

Consumers exhibit a cautious sense of insecurity when it comes to chatbots, particularly concerning the handling of financial information. While most responses fall in the mid-range, indicating neither a strong sense of security nor insecurity, concerns notably escalate when it comes to sharing credit card details and general data privacy. However, there is a lesser degree of discomfort with automation itself, suggesting a potential openness to chatbots if security issues are effectively addressed.

Consumers express a mixture of intrigue and hesitancy towards chatbots, especially in matters of trust, particularly regarding financial security. Data privacy concerns take precedence, overshadowing their acceptance of automation. Despite these reservations, there is a glimmer of optimism in their acceptance of automation as a concept. To garner consumer trust, chatbots need to prioritize transparency in handling data, instill trust through human oversight and robust security measures, and personalize interactions. By focusing on security concerns, chatbots have the potential to bridge the trust gap and unlock their full capabilities.

In their study titled "Examining the Drivers and Barriers of Intention to Use AI Chatbot to Purchase Apparel Online" (Myin, M. A., 2020), Watchravesringkan, K., and colleagues discovered that resistance to changing psychological readiness negatively impacted the perceived usefulness of AI chatbots. However, the relative advantage and complexity of psychological readiness had a positive influence, highlighting the importance of addressing psychological factors in the acceptance of AI chatbots.

Table 2.5: General Attitude Scale of Consumers towards Chatbot Utilization

Consumers General Attitudes:	Mean	Rank	Interpretation
Innovativeness	3.59	1	High
Optimism	3.38	2	Mid
Discomfort	3.16	4	Mid
Insecurity	3.27	3	Mid
General Average:	3.35		Mid

Consumers seem open to chatbots (Innovativeness: High) yet remain mid on both comfort and security concerns (Discomfort: Mid, Insecurity: Mid). While not overly enthusiastic (Optimism: Mid), they're not opposed to the technology. It's interesting that they're more innovative than optimistic, suggesting they see the potential but have reservations about current implementations.

Consumers are open to chatbots (innovativeness), but unsure about their current execution (mid optimism, discomfort, insecurity). They see the potential but have reservations. To win them over, chatbots need to be user-friendly, transparent, valuable, and constantly improving. By earning trust, chatbots can move beyond tentative acceptance and become valuable tools.

According to Astrid Schepman and Paul Rodway's study "Initial Validation of the General Attitudes Towards Artificial Intelligence Scale" (2020), the scale demonstrated strong psychometric indices as well as convergent and discriminant validity when compared to other measures. Summaries of the tasks completed by certain applications of Artificial Intelligence were taken from newspaper stories to cross-validate general attitudes with attitudes towards cases of AI applications. Both perceived capability and comfort level were evaluated for these.

Table 2.6: Independent Samples T-Test Results

	Statistic	df	p	
S&C_GENATT_AVE	Student's t	-1.02	118	0.308
Note. $H_a: \mu_1 \neq \mu_2$				

The researchers compared two groups based on their scores (likely related to general attitudes towards chatbots). While both groups have similar averages (around 3.3), a statistical test found no significant difference between them. However, the data might not be perfectly normal, so researchers should be cautious about this conclusion.

While both groups held relatively neutral stances towards chatbots (scoring around 3.3 on S&C_GENATT_AVE), the statistical test revealed no significant difference between them. However, a potential data normality issue throws a curveball, urging caution in drawing firm conclusions. To solidify this finding, the researchers can either turn to non-parametric tests, tweak the data to achieve normality, or simply gather more data.

Overall, both groups seem equally curious about chatbots, without leaning towards full acceptance or rejection. But, before declaring them statistically indistinguishable, further investigation is necessary. It's crucial to be cautious when interpreting data with potential limitations, as such thoroughness allows us to paint a more accurate and nuanced picture of consumer attitudes towards chatbots.

According to Anh D. Tran *et al.*, the study "Exploring the Impact of Chatbots on Consumer Sentiment and Expectations In Retail" Employing a hybrid automated sentiment analysis methodology, the researchers ascertain that: (1) the general perception of bots is less negative than that of online human agents; (2) these perceptions vary between the fashion and telecommunications industries; and (3) sentiments toward online human agents in both industries worsen following the implementation of chatbots by sellers.

Conclusion

The findings of this study shed light on the attitudes of both sellers and consumers towards the utilization of AI chatbots in the entrepreneurial industry of Noveleta, Cavite. The assessment of general attitudes, encompassing dimensions such as innovativeness, optimism, discomfort, and insecurity, provides nuanced insights into the acceptance landscape.

For sellers, the study reveals a cautious optimism, with a mid to slightly positive attitude, suggesting a potential openness to incorporating chatbots into their business practices. However, it highlights the need for targeted interventions to address specific concerns related to technology readiness.

Consumers, on the other hand, display a generally positive disposition, indicating a willingness to embrace chatbot technology. While there is openness and enthusiasm, reservations related to online business and mobility underscore the importance of tailoring features to address these concerns.

The significant differences identified in the Technology Readiness Index between sellers and consumers underscore the need for a differentiated approach in fostering acceptance and integration. To capitalize on the potential of AI chatbots, it is crucial to recognize and address the unique perspectives and concerns of both stakeholders. Implications of these findings extend to the educational realm, where the identification of potential school programs, projects, or activities can facilitate the dissemination of knowledge and awareness about AI chatbots. This can contribute to enhancing the digital literacy and preparedness of individuals in the entrepreneurial landscape.

Recommendations for businesses in Noveleta include targeted educational programs for sellers to enhance their understanding of chatbot advantages and technical aspects. Additionally, developers and businesses should prioritize transparency, security, and personalized interactions to build consumer trust. Bridging the trust gap and addressing specific concerns will be pivotal in unlocking the full potential of AI chatbots in the local entrepreneurial industry.

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